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Received - 2021-11-01 11:09:30 AM Control Number - 52373 ItemNumber - 206

PROJECT NO. 52373

REVIEW OF WHOLESALE	§	BEFORE THE
	§	PUBLIC UTILITY COMMISSION
ELECTRIC MARKET DESIGN	§	OF TEXAS

ERCOT STEEL MILLS' COMMENTS ON STAFF QUESTIONS RELATED TO ERCOT MARKET REDESIGN

TO THE HONORABLE COMMISSIONERS:

NOW COMES the ERCOT Steel Mills ("Steel Mills") and submits these comments in response to the Commission staff's October 26, 2021, questions regarding ERCOT market redesign.

I. INTRODUCTION

We appreciate the opportunity to submit our response to the Commission staff's request for comments. The Steel Mills are a group of large steel production loads within ERCOT. Due to the limited time for responding to the Commission staff's questions, which in some instances request detailed analyses, our responses are limited to the questions we can answer at the proverbial 10,000-foot level. We also reserve the right to modify our views as we have a further opportunity to consider the issues and/or additional information becomes available.

We recognize that the speed at which the Commission is moving is dictated by statutory directives enacted earlier this year in the aftermath of Winter Storm Uri. The incredibly fast timeline does not permit the degree of vetting that has historically been the case at ERCOT and the Commission when redesign of any single major market element is being considered, much less multiple changes as in this case. We therefore urge the Commission in its deliberations to keep in mind the maxims "first do no harm" and "measure twice, cut once." The design of the ERCOT market is composed of many moving pieces operating in harmony with one another to achieve the

¹ Mills purchase and consume large quantities of electricity to operate their respective mills and related support facilities. Given the highly energy-intensive nature of steel production, the Steel Mills have a strong interest in ensuring the continued reasonableness of energy costs for consumers as well as the ability of the ERCOT to maintain grid reliability and appropriate oversight of optimally structured wholesale markets for energy and ancillary services.

statutory mandate in PURA that retail customers be guaranteed, among other things, "safe, reliable, and reasonably priced electricity." Rapid changes to multiple elements of the current market design run the potential risk of unintended consequences for retail consumers, as well as for other stakeholders, including the Texas economy as a whole. For this reason, we urge the Commission, with regard to any market design decisions they choose to make this year, to adopt only clearly beneficial and straightforward improvements (that can be reversed, if necessary, at some future point), be cautious as to whether to make major changes and leave open the option to modify those decisions, when or if it becomes apparent that unintended consequences may result.

We fully support the Commission's objective of increased grid reliability. No one wants to ever experience a repeat of the Winter Storm Uri debacle. But, in the process of pursuing that objective, we expect that the Commission will be fully cognizant of the magnitude of the cost burden that could result for all ERCOT consumers as a consequence of the many market changes being contemplated and try to minimize this burden as much as possible. We look to the Commission to carefully balance the degree of increased reliability sought and the magnitude of increased consumer cost that will result, in a manner that also fulfills the statutory requirement for reasonably priced electricity.

In addition to minimizing overall cost and maximizing reliability, in our view, an important point to constantly keep in mind is the need to continue to foster the various forms of demand response that have developed in the market. Similarly, we urge the Commission to be vigilant to protect and not depart from other fundamental features of the Texas energy-only market, which has served Texas well.

II. RESPONSE TO COMMISSION STAFF QUESTIONS

1. The ORDC is currently a "blended curve" based on prior Commission action. Should the ORDC be separated into separate seasonal curves again? How would this change affect operational and financial outcomes?

In our view, the choice of using a blended curve or separate seasonal curves should turn on which option will provide better scarcity price signals to the market (which is the fundamental objective of the ORDC) and result in the most reasonable consumer prices. The Steel Mills

² Tex. Util. Code § 39.101(a).

have not conducted a study of the impact of retaining the current ORDC "blended curve," as opposed to reverting to the previously utilized seasonal curves. We can offer the general observation that higher prices should be concentrated during periods when reserves are low (scarcity conditions) – in short, there is no need to have ORDC adders during intervals when reserves are reasonably adequate.

2. What modifications could be made to existing ancillary services to better reflect seasonal variability?

ERCOT staff already performs seasonal adjustments to the quantities of the various ancillary services needed to ensure reliable operation during each season. We encourage the Commission to continue to allow ERCOT staff the leeway to determine the mix and quantity of ancillary services to be procured each season, subject to input from stakeholders and oversight by the ERCOT Technical Advisory Committee, the ERCOT Board of Directors, and ultimately, the Commission. In determining the mix and quantity, the cost and value of such services should be considered. At this point, we do not see the need for additional specific modifications related to this issue.

3. Should ERCOT develop a discrete fuel-specific reliability product for winter? If so, please describe the attributes of such a product, including procurement and verification processes.

We do not think a discrete fuel-specific reliability product for winter should be developed. All generators have historically been expected, and should continue to be expected, to invest appropriately in the design of their facilities. Common sense as well as good utility practice dictates that every generating unit should have a reliable fuel supply, regardless of season. A reliable fuel supply should therefore be a necessary prerequisite for participation in the ERCOT market. We suggest that the Commission develop a reasonable fuel reliability standard for each type of generating unit and require compliance with that standard as a cost of participating in the ERCOT market. The financial reward for reliable fuel supplies will be established by the pricing of power in the competitive energy market and generators should not be rewarded again financially through a reliability product.

a. How long would it take to develop such a product?

No comment at this time.

b. Could a similar fuel-based capability be captured by modifying existing ancillary services in the ERCOT market?

Most likely yes, but we believe all generators should be required, as part of the cost of entry into the market, to demonstrate that all of their units have a reliable fuel supply which meets a reasonable fuel reliability standard to be set by the Commission. Assigning the cost of a reliable fuel supply to consumers rather than generators undercuts a fundamental principal of the energy-only market that the capital and operating costs of assuring reliability, as well as the associated compliance risk of not doing do, is the sole responsibility of the generator, who is compensated through competitive market prices.

4. Are there alternatives to a load serving entity (LSE) Obligation that could be used to impose a firming requirement on all generation resources in ERCOT?

We believe that the current design of the ORDC curve, at least in the post-Uri environment, provides sufficient firming incentive to obviate the need for an LSE Obligation construct. Before Winter Storm Uri, no one envisioned that an event like that was even remotely possible. Since that event, any prudent business enterprise would hedge its energy requirements appropriately given the huge losses that occurred as a consequence of the inability of many generator units to operate as anticipated. Reasonable improvements to the ORDC (HCAP/VOLL and MCL) can be expected to maintain or enhance the firming incentive.

Additionally, if deemed necessary, some form of "firming" service could be implemented which, coupled with substantial penalties and high prices in times of true scarcity, would offer "carrot and stick" incentives that would serve as a reasonable alternative to the LSE Obligation construct.

The Steel Mills support the Commission's desire to take the necessary steps to ensure that there is sufficient dispatchable generation on the system and that generators operate reliably at the output levels reasonably expected of them. Our concern is that the Commission choose the vehicle for firming of generation resources that best accomplishes that task at the least cost to

consumers and the least disruption to the competitive energy-only market. We are concerned that the LSE Obligation is not the best choice in this regard.

5. Are there alternatives to an LSE Obligation that could address the concerns raised about the stakeholder proposals submitted to the Commission?

Yes. See the answer to question 4.

6. How can an LSE Obligation be designed to protect against the abuse of market power in the Wholesale and retail markets?

We are concerned about the increased risk of market power abuse by LSEs with significant generation assets if an LSE Obligation is implemented, but we do not know how the Commission can satisfactorily mitigate that increased risk. Given our concerns, we think that the potential market power abuse problem, in and of itself, is a valid basis for electing not to implement the LSE Obligation concept.

a. Will an LSE Obligation negatively impact customer choice for consumers in the competitive retail electric market in ERCOT? Can protective measures be put in place to avoid a negative impact on customer choice? If so, please specify what measures.

We believe that the LSE obligation concept, as currently suggested, could be detrimental to retail choice in ERCOT given the competitive advantage that generation-affiliated LSEs would have over smaller LSEs lacking a natural generation hedge at a manageable cost. A robust competitive retail market requires a competitive wholesale market with an abundant generation mix and abundant retail provider choice. The number of truly independent REPs among which retail consumers can choose between has significantly shrunk in recent years. The suggested LSE Obligation to hedge all or part of its load far in advance of real-time (even if it could be accurately forecast) could have a major impact on the number of independent LSEs remaining in the ERCOT market, further expanding the market shares of the two largest LSEs, who already collectively control over 70% of the ERCOT residential retail market.

b. How can market power be effectively monitored in a market where owners of power generation also own REPs that serve a large portion of ERCOT's retail customers?

That may prove difficult. Owners of generation with an affiliated LSE will have a huge advantage in the LSE Obligation market, as they can just transfer costs between the internal generation company and the affiliated LSE without regard to whether those financial transactions are visible to ERCOT and the IMM. These transactions are mostly private and not necessarily subject to public exposure.

c. What is the impact on self-supplying large industrial consumers who will have to comply with the LSE Obligation and will it impact their decision to site in Texas?

The LSE Obligation concept would likely impact a self-supplying large industrial's decision to site in Texas, to the extent they are not exempted from the obligation. How the impact would affect the decision whether to locate in Texas would require case-by-case determination, turning on the specific business plans for that specific facility. The requirement to comply with the LSE Obligation would in any event create risk that a new self-serving industrial facility would choose to abandon plans to locate within ERCOT.

With respect to existing industrial facilities considering construction of behind the fence generation, the imposition of an LSE Obligation could well result in some of those facilities deciding against doing so even though, from a system reliability standpoint, construction of that generation would be beneficial.

- d. What is the impact of an LSE Obligation on load-serving entities that do not offer retail choice, such as municipally owned utilities or electric cooperatives?
 No comment at this time.
- e. Can market power be monitored in the bilateral market if an LSE Obligation is implemented in ERCOT? Can protective measures be put in place to ensure that market power is effectively monitored in ERCOT with an LSE Obligation? If so, please specify what measures.

We are concerned that market power may not be subject to effective monitoring and correction since the bilateral market is comprised of private transactions between willing buyers and willing sellers. It might not, for instance, be possible for ERCOT or the IMM to determine whether an entity who fulfilled its LSE Obligation from an ERCOT market for such subsequently privately transacted bilaterally to offset the obligation physically or financially, leaving ERCOT, the IMM and the Commission guessing what happened, to the potential detriment of system reliability. Moreover, greater regulatory oversight may undercut the efficiency and effectiveness of the current market and drive-up costs.

f. Should the LSE Obligation include a "must offer" provision? If so, how should it be structured?

No comment at this time.

7. How should an LSE Obligation be accurately and fairly determined for each LSE? What is the appropriate segment of time for each obligation? (Months? Weeks? 24 hour operating day? 12 hour segments? Hourly?)

We think this issue would need extensive careful study and consideration. We are concerned about the ability to accurately predict, up to three years in advance, an LSE's obligation. The notion that ERCOT can predict "net load" with sufficient accuracy, even one month in advance of the operating month, is questionable.

Although ERCOT is improving its ability to forecast load, dispatchable generation, and wind and solar generation output, we fear that ERCOT will never have the ability to combine these forecasts with sufficient accuracy to produce a reasonably accurate and meaningful determination of an LSE obligation. Even day ahead, load, wind, and solar forecasts can be significantly inaccurate.

8. Can the reliability needs of the system be effectively determined with an LSE Obligation? How should objective standards around the value of the reliability-providing assets be set on an on-going basis?

We have doubts about whether the reliability needs of the system actually can be determined with an LSE Obligation. Whether it can be, or not, depends on issues such as how the LSE Obligation is structured, how it is administered, and how well and how far in advance ERCOT can accurately forecast net load. The devil is in the details, and the details are

presently yet to be determined. Designing and implementing an effective and reasonable LSE Obligation construct would be an inordinately difficult task for the Commission and ERCOT, and ERCOT stakeholders might obtain little assured benefit due to the inability of anyone to predict ERCOT net load with any reasonable degree of accuracy.

a. Are there methods of accreditation that can be implemented less administrative burden or need for oversight, while still allowing for all resources to be properly accredited?

No comment at this time.

- b. How can winter weather standards be integrated into the accreditation system?

 No comment at this time
- 9. How can the LSE Obligation be designed to ensure demand response resources can participate fully and at all points in time?

A foundational principle of the ERCOT energy-only market is the fundamental importance of demand response. Efficient operation of the market requires voluntary response to real-time scarcity price signals. Large commercial and industrial consumers provide much of this demand response by responding to scarcity pricing signals in the real-time market, and as a result, greatly assist in maintaining the balance between demand and supply and improving reliability on the system. It is critical to system reliability that any changes to the current market design continue to permit, and in fact encourage more voluntary price response.

For large industrial consumers, the ability to utilize demand response as a tool for management of their power costs is also critical to the success of their business operations. Texas industry needs unimpeded access to both the forward market and the real-time market in order to ensure that they can procure power to match fluctuations in their operations and meet their business and financial objectives at a low enough cost to support the continued competitiveness of the products which they produce. It is the current ability to use an optimal mix of forward market, day-ahead and real-time market procurement, and voluntary energy usage curtailment to match their power supply with their power requirements (which in many instances change daily, hourly and even each interval) that makes Texas such an attractive

location to site industrial facilities from a power perspective. Any change in the market design which impedes this ability will also impede the robustness of the Texas economy.

We do not believe that the LSE Obligation is the optimal path to follow in the Commission's push for greater system reliability, in part, because of its potential to impede the ability of industries to procure energy in an optimal manner by making full use of their demand reduction capabilities. However, should the Commission choose to adopt an LSE Obligation construct, it is imperative that an LSE not be required to hedge the portion of industrial loads that are non-firm, interruptible or curtailable or are served at real-time prices, as the cost of doing so would negate the value provided to the customer, to the LSE and to ERCOT system reliability that would otherwise be realized from customer demand response activity. The Energy and Environmental Economics (E3) whitepaper, which outlined the concept of a market design based on the LSE Obligation, specifically recognizes that LSEs serving non-firm or interruptible/curtailable loads should receive a commensurate reduction in their reliability requirement.³ In short, a non-firm load, by definition, is non-firm and should not be subject to an unnecessary and costly firming requirement. This important feature should be clearly delineated in any adoption of the LSE Obligation construct.

The failure to remove non-firm and interruptible/curtailable loads from the LSE Obligation could also disrupt the ability of industrial loads to optimally balance their power purchases with their actual electric demand. For example, many industrial consumers procure their electricity needs using block & index pricing. This consists of purchasing a block of firm power to meet a substantial portion of their expected energy needs, with the variable remainder of their needs procured from their LSEs at the real-time market clearing price. Through a block & index procurement arrangement, industrial loads that have variable energy needs can precisely match their energy purchases with frequent changes in production. The industrial customer can optimally manage its fluctuating energy requirements by selling the unused portion of its block power back to its LSE at the current market clearing price, or if all of its energy requirement is not covered by the block, it can supplement the block with the index portion, which is supplied by real-time market purchases. Industrial consumers having interruptible/curtailable capability can choose to curtail consumption in response to scarcity prices and forgo consumption of any non-firm index portion in excess of the firm block.

³ E3 whitepaper, "The Load-Serving Entity Reliability Obligation," September 2021 at pp.20, 28.

They can also sell all or part of their firm block purchase back into the market when scarcity prices prevail (to the benefit of system reliability), with the goal of driving down their energy costs to the most efficient level possible. To the extent that an industrial customer's LSE is required to hedge all of the customer's potential demand, whether firm or non-firm, the cost of the LSE's hedge of non-firm power would negate some or all of the value offered by purchasing real-time or non-firm power.

Industrial loads with interruptible capabilities may further manage their energy costs through participation in various active demand response programs offered by ERCOT, LSEs and TDUs. The revenue derived from participation in those programs assists in further driving their energy costs to the most efficient and competitive level possible. To the extent LSEs have to hedge loads enrolled in those programs, the value of participation in those programs may be substantially diminished and, if so, will likely erode such participation.

The bottom line is that, if the Commission chooses to move forward with the LSE Obligation concept, it is imperative that real-time and interruptible industrial loads be excluded from their LSEs' reliability obligation in order to ensure that these loads can continue to supply the optimal portion of their load from the real-time market and participate fully and at all points in time in demand response activity without the value of that activity being negated by imposing a firming requirement on the LSE for those loads.

10. How will an LSE Obligation incent investment in existing and new dispatchable generation?

In our view, an LSE Obligation is likely to incent additional investment only to the extent that it requires LSEs through regulation to procure and generators to commit to provide more power than otherwise would have been produced by normal market forces and/or produces a significant increase in forward energy prices (for example, due to increased demand for forward transactions resulting in increases in forward prices). However, either of these options, in turn, will likely significantly increase the cost of energy for ERCOT consumers. Whether the increased cost to consumers is outweighed by additional reliability based on the amount of additional dispatchable generation the LSE Obligation might incent is not readily determinable, particularly without a carefully crafted cost/benefit analysis.

11. How will an LSE Obligation help ERCOT ensure operational reliability in the real-time market (e.g., during cold weather events or periods of time with higher than expected electricity demand and/or lower than expected generation output of all types)?

We are uncertain that an LSE Obligation in fact will help ensure operational reliability during cold weather events or periods of higher-than-expected demand and/or lower-than-expected generation output.

As we have stated in prior responses, the fact of the matter is that net load may not be capable of being forecast with sufficient accuracy to ensure operational reliability in real-time. This exceedingly difficult task is fraught with error due to the unpredictability of ambient air temperature, wind direction, cloud cover, and other variables. Even with full-time weather forecasters on staff and the purchase of third-party forecasts, ERCOT has failed to forecast the most severe weather experienced by ERCOT operations. Rare events only occur rarely and simply cannot be forecast accurately in advance of real-time.

Moreover, even if load forecasts were always accurate, the LSE Obligation does not provide assurance that the resources acquired will actually operate under severe weather conditions (to the degree any assurance can be provided, it will be due to reliability standards, which should be set regardless of whether an LSE Obligation construct is adopted). Even had an LSE Obligation been in place prior to Winter Storm Uri, we are not persuaded that it would have significantly mitigated the disastrous outcome of that event.

12. What mechanism will ensure those receiving revenue streams for the reliability services perform adequately?

In our view, there is no universally applicable mechanism for ensuring those receiving revenue streams for reliability services can and will perform adequately. Each reliability service is different and have different performance expectations that correlate to the type of service, the characteristics of the resources providing the service and the relative value of the resource to the ERCOT system, as well as different compensation levels ranging from very low and very high. It is for this reason that each ancillary service or demand response program has different performance requirements, and we believe that to be appropriate.

In some cases, such as the suggested enhanced weatherization service or the existing black start service, there is no assurance that the expected reliability benefit will be realized until the black-swan type of event actually occurs. For example, with respect to a reliability service to provide services during a highly infrequent event, such as a storm like Uri or a black start event, actual performance is not capable of being measured until the event occurs, which could be years in the future, and after many years of payments have been made at consumers' expense to the resources in question.

13. What is the estimated market and consumer cost impact if an LSE obligation is implemented in ERCOT? Describe the methodology used to reach the dollar amount.

The Steel Mills have not undertaken a study of the market and consumer cost impact of implementing an LSE Obligation, but we fear that the tangible and intangible cost impact could be very high, and without commensurate reliability benefit. We also note that it would be difficult to assess the specific impact without first determining the full details of the LSE Obligation construct. The Commission may wish to engage a third-party consultant to undertake a robust analysis of the expected cost before moving forward on this issue.

14. How long will the LSE Obligation plan take to implement?

The length of time required to implement an LSE Obligation depends, among other factors, on the complexity of the design, whether software changes to major ERCOT systems will be required, and the extent to which ERCOT needs to build additional specialized in-house capabilities in order to perform any new functions required to oversee and administer the LSE Obligation construct. The time required to accomplish all of that could take a number of years, and that is not taking into consideration all of the time required by stakeholders to flesh out the fine details of the LSE Obligation and translate them into ERCOT Protocols, and for LSEs and other stakeholders to modify their operations and business models to accommodate the new requirements.

15. If the Commission adopts an LSE Obligation, what assurances are necessary to ensure transparency and promote stability within retail and wholesale electric markets?

The LSE Obligation would significantly rewrite the way the market works in numerous respects and would be a substantial departure from the current energy-only market. We cannot give a comprehensive answer at this point without a greater understanding of the proposed

details. Instead, given our role as industrial consumers in the market, we will focus our answer primarily on some issues that impact such consumers.

Depending upon how it is structured, as discussed previously, we are concerned that the LSE Obligation could negatively impact the practical use by and value to industrial customers of block & index contracts and real-time and curtailable energy purchases to manage power costs. Similarly, it also has the potential to negatively impact either passive or active forms of demand/price response by large consumers. It could result as well in negatively impacting the value to and use of real-time energy purchases by industrial consumers in managing their power use and costs.

To prevent instability within the retail and wholesale electric markets, it is important that the Commission ensure that any LSE Obligation adopted by the Commission permit and facilitate the continued ability of industrial customers to make effective use of block & index and other forms of time of use and real-time pricing, and to engage in active and passive demand response, ideally by excluding loads subject to such pricing or demand response (particularly the interruptible/curtailable portion of their loads) from their LSEs' LSE Obligation. These essential power cost management tools are critical to help maintain reasonable, competitive power prices for manufacturing in the state.

16. Are there relevant "lessons learned" from the implementation of an LSE Obligation in the SPP, CAL-ISO, MISO, and Australian markets that could be applied in ERCOT?

No comment at this time.

Respectfully submitted.

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OF TEXAS

EXECUTIVE SUMMARY

ERCOT STEEL MILLS' COMMENTS ON STAFF QUESTIONS RELATED TO ERCOT MARKET REDESIGN

The Steel Mills offer the following executive summary of our comments, as requested:

- The Commission in its deliberations should keep in mind the maxims "first do no harm" and "measure twice, cut once." The design of the ERCOT market is composed of many moving pieces operating in harmony with one another. Rapid changes to multiple elements of the current market design run the potential risk of unintended consequences for retail consumers, as well as for other stakeholders, including the Texas economy as a whole. For this reason, we suggest that the Commission, with regard to any market design decisions they choose to make this year, adopt only clearly beneficial and straightforward improvements (that can be reversed, if necessary, in the future), be very cautious as to any fundamental market design changes, and leave open the option to modify those decisions. One fundamental objective that we support would be to protect and enhance demandresponse opportunities and maintain the essential nature of the energy-only market.
- We fully support the Commission's objective of increased grid reliability. But we are also concerned about the magnitude of the cost burden that could result for all ERCOT consumers as a consequence of the many major market changes (such as the LSE Obligation) being contemplated. The degree of increased reliability should be balanced by the magnitude of increased consumer cost that will result, in a manner that does not undercut the statutory requirement for reasonably priced electricity.
- We do not favor adoption of the LSE Obligation concept. We think that it could be detrimental to retail choice in ERCOT given the competitive advantage that generation-affiliated LSEs would have over smaller LSEs lacking a natural generation hedge at a manageable cost. Monitoring and effectively correcting possible market power abuse would likely be difficult. We are also concerned that the concept may not be consistent with an energy-only market, may reduce competition and flexibility, and could result in more expensive energy in the forward markets.
- The requirement to comply with the LSE Obligation may negatively affect some decisions to site new and/or expand existing industrial facilities in the state.
- We are concerned about the ability of ERCOT to accurately predict, up to three years in advance, an LSE's obligation. The notion that "net load" can be predicted with sufficient accuracy, even one month in advance of the operating month, is questionable.

- The LSE Obligation may negatively impact large industrial and commercial customers who purchase power through block and index pricing, though day-ahead and real-time purchases, or who are interruptible/curtailable or provide demand response. Should the Commission adopt an LSE Obligation, it is critical that an LSE should not be required to hedge demand responsive, non-firm or interruptible/curtailable industrial load (or load subject to time of use or wholesale real-time or index prices), as the cost of doing so could negate the value provided to the customer, to the LSE and to ERCOT system reliability that would otherwise be realized from customer demand response activity. E3, in its LSE Obligation whitepaper, expressly recognizes that LSEs serving demand-responsive, non-firm or interruptible loads (including time-of-use pricing) should receive a commensurate reduction in their reliability requirement. In short, common sense dictates that if the load is non-firm (or demand responsive), there should not be an unnecessary and costly firming requirement.
- The length of time required to implement an LSE Obligation depends on the complexity of the design, whether software changes to major ERCOT systems will be required, and the extent to which ERCOT needs to build additional specialized in-house capabilities in order to perform any new functions required to oversee and administer the LSE Obligation construct. The time required to accomplish all of that could take years, and that is not taking into consideration all of the time required by stakeholders to flesh out the fine details of the LSE Obligation and translate them into ERCOT Protocols.
- There are alternatives to the LSE Obligation that can firm up generation resources in Texas. The current ORDC, as well as the proposed modifications to the HCAP and MCL elements of the ORDC, already serve a firming function. Additionally, if necessary, a discrete "firming" service could possibly be implemented which, coupled with substantial penalties and high prices in times of true scarcity, would offer "carrot and stick" incentives that could be quite effective as an alternative to the LSE Obligation construct.
- The choice of using a blended ORDC curve or separate seasonal curves should turn on which option will provide better scarcity price signals to the market and result in the most reasonable prices to consumers. We have not conducted a study to determine which option will produce scarcity price signals, but we would observe that higher prices should be concentrated during periods when reserves are low (scarcity conditions) and adders should not be extended into intervals when reserves are reasonably sufficient.
- No modifications to existing ancillary services are needed to better reflect seasonal variability given that ERCOT already performs seasonal adjustments to the quantities of the various ancillary services needed to ensure reliable operation during each season. We support continuing to allow ERCOT the leeway to determine the mix and volume of ancillary services to be procured each season, subject to appropriate input and oversight.
- A discrete fuel-specific reliability product for winter should not be developed. We suggest
 instead that the Commission develop a reasonable fuel reliability standard for each type of
 generating unit and require compliance with that standard as a cost of participating in the
 ERCOT market.